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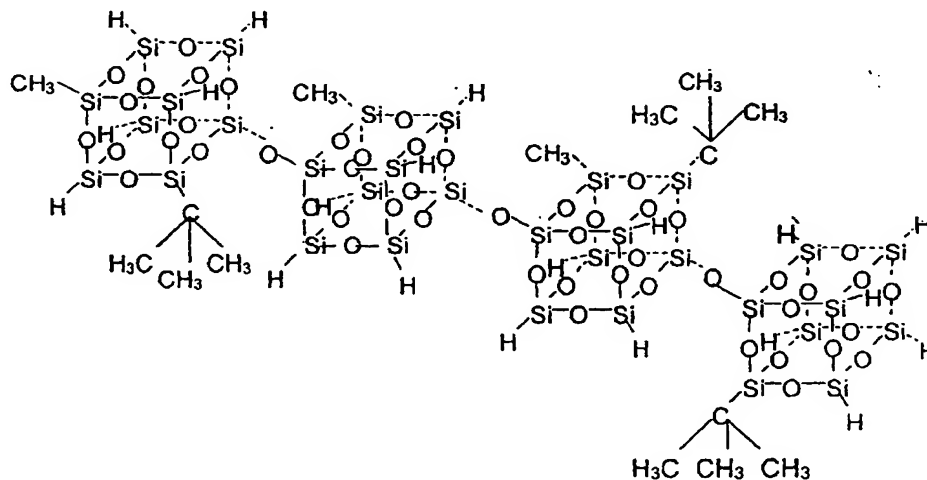
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[Continued on next page]

(54) Title: NANOPOROUS MATERIALS AND METHODS OF FORMATION THEREOF



(57) Abstract: Low dielectric materials are described herein that comprise a plurality of pores or nanopores in addition to the ultrananopores. It is further contemplated that the low dielectric materials described herein will have a dielectric constant of less than about 3. The dielectric materials are formed from polymer compositions, wherein the polymer compositions comprise a plurality of monomers and wherein at least one monomer comprises a radical precursor bonded to a structural precursor. Further, methods of forming dielectric materials from polymer compositions are presented. The figure shows the chemical structure for a methyl/t-butyl Low organic Content/Low Organic Siloxane Polymer.



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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/26276

<b>A. CLASSIFICATION OF SUBJECT MATTER</b>		
IPC(7) : H01B 3/02, 3/30, 3/46; B32B 3/26; C08G 65/00, 77/04		
US CL : 252/570,573; 428/304.4,312.6,447; 521/154,180; 525/390,416,474,534		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b>		
Minimum documentation searched (classification system followed by classification symbols) U.S. : 252/570,573; 428/304.4,312.6,447; 521/154,180; 525/390,416,474,534		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Please See Continuation Sheet		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	US 6,472,076 B1 (HACKER) 29 October 2002 (29.10.2002), column 2, lines 15-25, column 11, lines 1-67, column 12, lines 37-67, column 14, lines 20-40.	1, 3-6, 7, 9, 11, 15-19, 28, 32, 33, 35-38, 40
X	US 6,107,357 A (HAWKER et al) 22 August 2000 (22.08.2000), column 4, line 64 through column 5, line 33, column 5, line 53 through column 6, line 56, column 8, lines 1-24, column 10, lines 6-63, column 11, lines 27-60.	1-9, 11-21, 23, 24, 26-40
X	US 6,143,360 A (ZHONG) 07 November 2000 (07.11.2000), column 3, lines 30-66, column 6, lines 39-67.	1-7, 9, 11-21, 23, 24, 26-38, 40
X	US 6,156,812 A (LAU et al) 05 December 2000 (05.12.2000), column 3, lines 13-52, column 7, line 53 through column 8, line 56, column 11, lines 55-67, column 12, lines 23-51.	1-3, 14, 16-21, 23, 24, 26-32, 38
A	US 6,177,143 B1 (TREADWELL et al) 23 January 2001 (23.01.2001), column 2, lines 19-62.	1-41
A	US 6,235,353 B1 (DRAGE et al) 22 May 2001 (22.05.2001), column 2, lines 38-55.	1-41
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
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**Continuation of B. FIELDS SEARCHED Item 3:**

EAST search, search terms: ultranapore, ultranaporous, dielectric material, dielectric costant, radical precursor, structural precursor, adamantane, pore, nanometer, polysiloxane, organopolysiloxane, polyorganosiloxane, polydiorganosiloxane, diorganopolysiloxane, silicone, siloxane, hydridosiloxane, organohydridosiloxane, silsesquioxane, polysilsesquioxane.